Respiratory Medicine (1996) **90**, 123–125

Editorial

Smoking cessation: professional problem or public policy?

Smoking-related lung diseases form the major part of respiratory physicians' workload in the developed world. The evidence for the association of cigarettes and lung disease remains compelling (1,2) and gains further support from the most recent follow-up study reported by Sir Richard Doll and his colleagues (3). They found that smokers aged 45–64 years had a three-fold excess mortality compared with non-smokers, and those aged 65–84 years had doubling of their mortality. Their data clearly demonstrates the well-known dose–response relationship between the number of cigarettes smoked and the likelihood of dying from major pulmonary disease. Thus the mortality rate for all respiratory diseases is 4·7 times higher in people smoking more than 25 cigarettes day^{-1} than in non-smokers, and that from lung cancer and chronic obstructive pulmonary disease (COPD) are 25 and 23 times greater, respectively, in similarly heavy smokers (3). If smoking habits continue unchanged, excess annual mortality due to tobacco will increase from 2 to 3 million by 2025 in the developed world and from 1 to 7 million in the developing world (4).

Smoking cessation is worthwhile and the sooner the better, although statistically significant improvements in expected mortality can be seen even when the patients stop smoking in later life (3). Similar findings are seen when other indices of cigarette-induced lung damage such as the rate of decline in FEV_1 are studied (5,6). Other indirect gains from stopping smoking, apart from the financial ones, are a reduction in passive-smoking-induced lung tumours and in childhood respiratory diseases, particularly asthma, where there is a strong association between parental smoking and disease development particularly when the mother smokes during pregnancy (7,8).

If awareness of the risks of smoking was all that was needed to discourage it, then smoking cessation would be a simple task. In one sense this is true, at least among those who understand what the evidence really means, as the number of British doctors smoking cigarettes has fallen from 53% 40 years ago to 7% now. However, nicotine is a drug of addiction and cigarettes are a particularly effective way of delivering it. The alkaline pH of manufactured cigarettes encourages nicotine absorption from the alveoli with the drug reaching the brain within 10 s (9). This gives exquisite control of the dose of nicotine delivered which can be varied by minor changes in puff volume and inspiratory flow rate to ensure a constant level in the blood (10). We should not be surprised then that nicotine is rated a harder drug to abandon than is cocaine among those addicted to both (11). However, physical dependence is not the only, or even necessarily the greatest, barrier to smoking cessation. For many patients, smoking defines their social identity from youth when they use it as a marker of adult behaviour, through middle age when the exchange of cigarettes and shared smoking promotes social bonding through to the point when fears of imminent mortality, real or imagined, make them stop. The skilful marketing of cigarettes as social statements has prevented a rapid collapse of tobacco sales in the face of medical evidence of its dangers. Thus attention to both the individual patients need and the wider social context of their tobacco use is needed if smoking cessation rates are to rise.

Abundant data are available about the impact of doctor advice on smokers. Brief anti-smoking advice from a family physician will persuade 3·5% of patients to stop smoking permanently rising to 5·5% if the advice is accompanied by anti-smoking literature (12). Rather better results of 5·1% and 8·1% sustained quitting are seen when respiratory outpatients are advised in a similar fashion at the hospital outpatient clinic (13). If patients are more positively motivated and smoke more than 10 cigarettes day^{-1}, prescription of nicotine replacement as either gum or transcutaneous patches can double their quit rates with sustained abstinence of up to 23% in some series of smokers attending specific clinics and about half this rate in general community use (14,15). The use of nicotine gum appears to be more acceptable in studies from North America compared with Europe.

The most recent study to address this issue is the Lung Health Study of smokers with early chronic

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obstructive pulmonary disease (16). In this 5-yr trial, 5887 smokers, mean age 48·5 years with spirometric evidence of COPD (mean FEV_1 2·64 l, mean FEV_1/FVC ratio 63%) were randomized to either normal advice as above or an intensive smoking cessation programme including nicotine gum with or without the addition of inhaled ipratropium bromide. The rate of decline of FEV_1 with time did not differ between patients treated with the anti-cholinergic drug or placebo but was significantly less in those given gum and advice than in patients just given normal anti-smoking advice (196 ml *vs.* 267 ml respectively). The intensive advice groups who used nicotine gum up to and beyond 12 months had a higher sustained quit rate than did the control group (22% *vs.* 5%). Thus in patients willing to consider stopping smoking, intensive advice and nicotine replacement can be effective. Foulds and Jarvis have suggested that a combination of brief advice for all, and intensive follow-up for patients interested, would persuade about 6% of all smokers to stop permanently, offering them a doubling of life expectancy over the subsequent 15 yr (17).

Such strategies are important for individual smokers and produce a significant health gain since even these modest results are important given the continuing high prevalence of smoking. However, larger impacts on smoking which will actually prevent disease must rely on central government action which is likely to offend vested tobacco interests. Public health education campaigns to reduce smoking have been effective (18). Thus the present level of cigarette consumption is not only lower in absolute terms than that in the 1960s, but represents a reversal of the previously remorseless increase in tobacco sales that had begun in the 1930s. The most effective means of reducing cigarette sales are the restriction of tobacco advertising and increasing product cost 'in real terms'. Powerful evidence for the former comes from New Zealand where tobacco sales fell by 9·6% in the first 2 yr after legislation banning tobacco advertising with a projected reduction in smoking prevalence of 15% of the population by the end of the century. At least one authoritative overview has supported the importance of this step (19). Failure to ban tobacco advertising says more about political expediency than the quality of the data against it. Targeting of advertising to specific groups is a recent, more sinister, development well documented in developing countries, but also seen in the developed world. There are now clear data showing that the introduction in the U.K. of a poster campaign using the 'cheeky chappy' character Reg to promote Embassy Regal cigarettes led to an increase in the number of cigarettes smoked, and an increased smoking prevalence among children in those areas of the U.K. exposed to the campaign compared with those not so targeted (20). These data discredit the often repeated claim that advertising does not increase sales but simply serves to reinforce brand identity.

Tobacco sales show significant price sensitivity such that a 1% increase in price will reduce overall sales by 0·5% (21). Recent moves to increase tobacco taxation in a planned fashion beyond the rate of inflation must be welcomed (22). However, there are significant differences in the impact of health publicity and taxation between men and women and in different socio-economic groups. People in lower socio-economic groups smoke significantly more (50% of poor unemployed people smoke compared with 16% of professionals) and these groups show significant price sensitivity reducing their smoking by 1% for each 1% increase in price, unlike more affluent smokers who are unaffected by this. Women of all ages, including teenagers, are less responsive to health publicity but are more responsive to changes in cigarette price (21). In general, the impact of health publicity declines significantly with age. Thus any solution to the problem of smoking must address these facts which are supported by evidence from many other countries. Without positive leadership from central government and a willingness to take an unpopular decision on taxation, sustained tobacco abstinence will not be possible.

Important though taxation, health publicity and advertising restrictions are, these steps alone will not be enough to eradicate smoking. The creation of smoke-free environments in public places, government offices and recreational areas coupled with legal action against people breaking such restrictions which lead to the encouragement of a 'smoke-free' culture are essential if the social use of tobacco is to be curbed. Outright prohibition as has been attempted with alcohol is not likely to produce sustained behavioural changes and may create a ghetto mentality among persecuted smokers.

For respiratory physicians, tobacco smoking has produced a 'smoky grey' plague to replace the white plague of tuberculosis that dominated our clinical lives until the middle of the century. The resolution of the TB epidemic came gradually with better nutrition, housing and legislation to encourage case finding and immunization. Chemotherapy made an enormous difference to the individual patient and contributed somewhat to the overall decline in disease prevalence (23). I believe the same to be true for the smoking-related lung diseases. As physicians, it is vital that we support national efforts to increase

tobacco taxation, ban tobacco advertising and encourage a smoke-free culture whilst ensuring that sufficient time and resources are available to help the individual patient stop smoking. These goals are not incompatible nor must they be made to appear so.

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Aintree Chest Centre
Liverpool, U.K.

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